A Stronger U.S. Economy Requires National Commitment and Collaboration Among Industrial and National Laboratories, Scientists and Engineers, and Universities

DOE Facilitates the Process and Catalyzes Industry Interactions

Advanced Industrial Materials (AIM)
Office of Industrial Technologies (OIT)

DOE Vision Industries

Supporting Industries

- Forging
- Heat Treating
- Process Heating
- Welding

Within the 1st 4 years: 101 Companies in 27 States have Requested MPLUS

MPLUS
Metals Processing Laboratory
Users facility

Stronger U.S. Economy

MPLUS at ORNL Provides Technical Expertise and Specialized Facilities

The Metals Processing Laboratory User Facility (MPLUS) is a DOE designated user center.

ornl
UT-BATTELLE

MPLUS purpose is to improve energy efficiency and enhance U.S. competitiveness.

Metals Processing Laboratory Users (MPLUS) Facility

MPLUS impacts the energy efficiency of IOF industries, crosscutting and national program industries.

Goal: The goals of the MPLUS facility is to assist U.S. industries and academia in improving energy efficiency, improving environmental benefits, and U.S. competitiveness aspects by focusing on materials related issues. The Metals Processing Laboratory Users Facility is an officially designated DOE user facility. It supports OIT related activities including the Industries of the Future, Crosscutting and National Programs. The facility provides access to specialized capabilities and expertise needed to solve primarily metals based and other materials issues. MPLUS is also integrated with other user facilities in order to provide the best approach to finding solutions to needs. MPLUS has four user facilities including (1) Metals Processing (melting, thermomechanical processing, casting, solidification, forging, heat treating...), (2) Joining (weld metal solidification, advanced welding processes, brazing, weld modeling...), (3) Characterization and Properties (nondestructive evaluation, residual stress measurements, high temperature mechanical properties, fracture toughness, corrosion, microstructural evaluation...), and (4) Process Modeling (high performance massively parallel computing, microstructural modeling, deformation modeling, process modeling...). In the past four years as a DOE OIT designated user facility, MPLUS has received over 150 proposals by 101 companies from 27 states for joint efforts related to primarily metals and other types of materials. Projects with industry and academia crosscut all of the "Industries of the Future," other crosscutting industries including heat treating, forging and welding, Crosscutting programs, and National programs.

For additional information, please contact:

Gail Ludtka
Oak Ridge National Laboratory
1 Bethel Valley Rd.
Oak Ridge, TN 37831-6152
Telephone: (865) 574-4652
E-mail: ludtkagm@ornl.gov

and

Peter Angelini
Oak Ridge National Laboratory
1 Bethel Valley Rd.
Oak Ridge, TN 37831-6065
Telephone: (865) 574-4565
E-mail: angelinip@ornl.gov